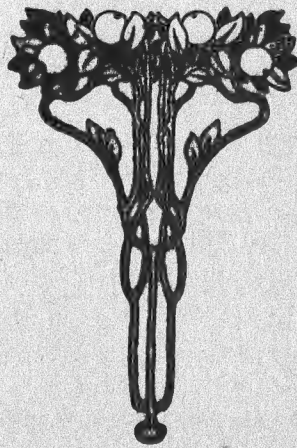


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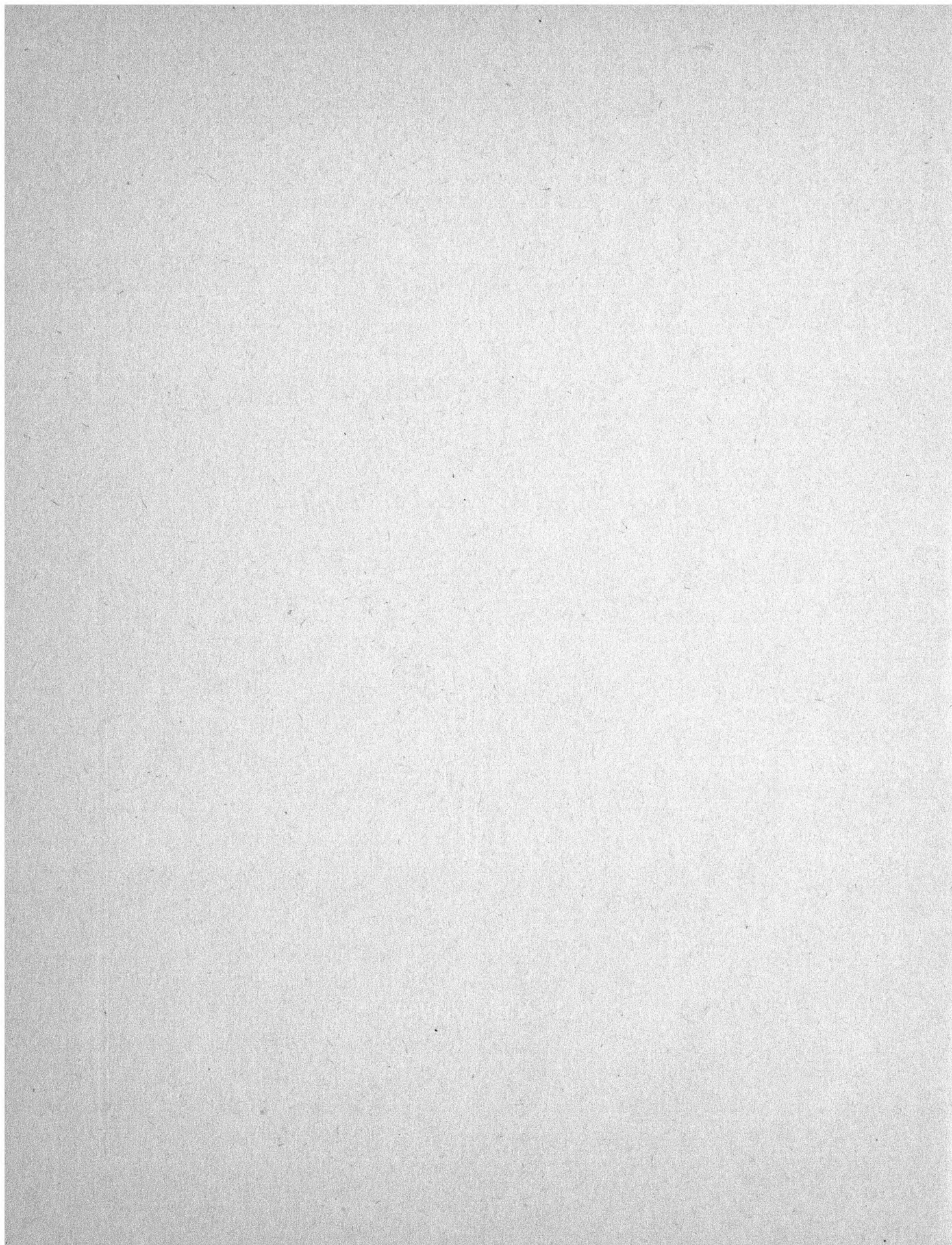
*Submissions of the Medicine Hat
Chamber of Commerce*

— Respecting —

*The Proposed Irrigation of the
Redcliff-Ronalane District*



February 1938



SUBMISSIONS OF THE MEDICINE HAT CHAMBER OF COMMERCE
RESPECTING
THE PROPOSED IRRIGATION OF THE
REDCLIFF-RONALANE DISTRICT

The submissions herein contained are made on behalf of the Medicine Hat Chamber of Commerce in association with the Redcliff Chamber of Commerce, both organizations being composed of manufacturers, merchants, professional men, farmers; in fact men in every walk of life, and while they are primarily intended to serve the interests of adjacent rural districts which will be affected directly by the proposed irrigation scheme, as well as Medicine Hat and Redcliff, they also have a direct, and an equally important indirect application to the whole of South-Eastern Alberta, and the drought areas in the Province of Saskatchewan.

It is assumed that no argument need be advanced, to establish the economic and practical value of irrigation as applied to agriculture. The United States of America enacted its first statute for the establishment and development of irrigation projects in 1902. This type of development proceeds apace in that country, where millions of dollars have already been spent on irrigation schemes, and where at the present time gigantic sums of public money are being spent in new schemes like the Grand Coulee Development in the State of Washington. This project will enable over 1,000,000 acres to be placed under water.

Irrigation in British India and Egypt had its origin in these countries many years ago, and is today a potent factor in the economic scheme of agriculture.

In the Province of Alberta there are many irrigation schemes, and while they operate commercially with varying degrees of success, it is conceded on all sides, that the economic and practical factors are now so firmly established, that they cannot now be disregarded in any discussion regarding agriculture. It is submitted therefore, that no argument need be advanced as to the practical and economic utility of irrigation as an appurtenant to agriculture.

The Medicine Hat District for the purpose of this submission comprises that area lying east and west between the Fourth Meridian and Range Seventeen (17), and lying north and south between Township Six (6) and the Red Deer River. Originally this country was exclusively devoted to ranching until about the year 1908, when it was thrown open for settlement. Between 1908 and 1912 hundreds of farmers secured homesteads and pre-emptions under the then existing regulations; they built homes and farm buildings, fenced their land and settled down with hope and courage in the business of farming. Many of these men came from the United States or Eastern Canada, where they had sold their farms, and on their arrival in Western Canada were possessed of some capital, and were entitled to the deferred payments from the farms which they had sold.

This extensive settlement was permitted and actively promoted by the Dominion Government, in spite of the fact that the area in question is situated approximately on the base of what is known as the Pallisser Triangle — a definite, known, drought area, with a normal precipitation insufficient to ensure a continuity of even average crops.

By the year 1914 those farmers who came without capital were being forced to abandon their lands, and in that year the district was faced with a devastating drought, followed by such extreme distress as to call for the expenditure of huge sums of money by the Federal Government for direct relief, and for seed grain and feed in the following year.

A cycle of wet years in 1915, 1916 and 1917, restored confidence, and the enormous crops harvested in those years, coupled with the subsequent high war prices for agricultural products, created temporary prosperity. It also created an artificial prosperity in the shape of greatly enhanced land values, which later experience proved could not be paid.

Then followed a cycle of dry years with consequent distress. In 1927 and 1928 adequate rainfall improved the farmers' position, but these years were followed by drought worse than ever experienced, culminating in a total crop failure in the year 1937. During this period the prices of agricultural products fell to unprecedented low levels.

In the period between 1914 and 1920, mortgage companies and banks loaned freely in this district, lumber companies and merchants advanced liberal credit and so kept the farmers floating; commencing about the year 1919 the Provincial Government advanced feed and seed, all of which helped to retain many farmers on the land who otherwise would have been forced to move elsewhere.

In spite of mortgage and bank loans, credit and Government assistance, the hope and courage of the farmer faded out and the area before mentioned which was once a well settled populous district has been almost completely abandoned, and the lands largely have reverted to the Government for non-payment of taxes. The first legislation designed to safeguard the interests of farmers was intituled "The Drought Area Relief Act" and it applied only to the Medicine Hat area.

Not only has the farmer suffered from these drought conditions. The range lands of this district have deteriorated during the past decade, and the question of winter feed and water for the rancher has become serious.

During the past four or five years, the drought area has extended in all directions, and today embraces all parts of Southern Alberta, except where there is irrigation, and eastward to a point between Moose Jaw and Regina in the Province of Saskatchewan. Thousands of farmers in this extended area find themselves in a state of bankruptcy. To the foregoing may be added the well recognized fact that since 1921, farming has generally been an unprofitable business. In 1930, Messrs. Wilson, Fairfield and Charlesworth, in presenting a report to the Alberta Government regarding the condition of the Lethbridge Northern Irrigation District, said inter alia:—

"Since the late Fall of 1920, the world has witnessed a declining level of prices and a very drastic period of agricultural and economic adjustments in which the food-importing nations of Europe have changed as far as possible to the policy of self-sufficiency and are not taking food supplies from the exporting nations at prices commensurate with their production costs and pre-war land values. Prices in the last decade have fluctuated with the business cycle from high to low. Nevertheless, the trend has been and still is decidedly downward and the debt paying power of agricultural production has diminished so rapidly that agriculture in general since 1920 has been in deep distress."

There has been little change in the situation since that report was presented and it is equally true today, that agriculture is in deep distress. The drastic restriction of production in the drought area already mentioned, has simply intensified for our rural population what is a serious problem where there is no drought factor.

Recognition of the serious plight of agriculture in these distressed areas was the enactment, by the administration of the Rt. Hon. R. B. Bennett of The Prairie Farmers' Rehabilitation Act of 1935. Continued by the present administration on an extended scale, the object sought to be attained by this enactment is the rehabilitation of the farmer in the drought areas, by means of financial and engineering assistance in the construction of stock-watering dams, and small individual, or community irrigation schemes.

Thus a long series of dry years, accompanied by high winds which cause serious damage through soil drifting, has placed agriculture in the districts mentioned in a precarious situation, and has brought governments and individuals to the definite conclusion that some form of aid is required to give much needed stability to this basic industry. Reference might be made to the assistance given to agriculture in the United States during the depression following the year 1929. Without either commenting upon, or even venturing to criticize the methods employed in that country, the fact remains that recognition was given by the Government to the fact, that the basic industry of agriculture must be rescued from its serious plight, or the wheels of industry must cease to revolve, and the nation must starve. A similar situation confronts the greater part of Southern Alberta today. The answer to the problem is irrigation.

Other factors enter into the problem under discussion. The City of Medicine Hat is situate on the main line of the Canadian Pacific Railway Company, approximately thirty-three miles west from the Saskatchewan border. With the advent of the farmer between 1908 and 1914, the City became an important distributing and manufacturing centre. Its agricultural importance is demonstrated by the establishment of:

The Ogilvie Flour Mills with a daily capacity of 2300 barrels;
 The Lake of the Woods Milling Company with a daily capacity of 1350 barrels;
 The Maple Leaf Milling Company, Limited, with a daily capacity of 1500 barrels;
 The Alberta Linseed Oil Mills has a daily grinding capacity of 900 bushels.

The latter company cannot now secure its raw material locally, while the flour mills require to ship their requirements from long distances, whereby they are subjected to intense competition from their more strategically placed competitors in Calgary. In the last crop year the three flour mills brought over 90% of their raw material from points far beyond the Medicine Hat area.

Medicine Hat and Redcliff are the centres of the clay industry of Western Canada. Five large brick, tile, and sewer pipe plants, and a pottery, are situate at these two points.

The magnitude of the investment in this City can be seen from the following figures:

Assessed value of improvements subject to taxation	\$ 6,983,675.00
Assessed value of improvements not subject to taxation, e.g. Government buildings, schools, churches	1,427,690.00
Civic improvements, administration buildings, fire halls, water works, power house, gas and sewer system and the like	5,000,000.00
	<u>\$13,411,365.00</u>

It is to be pointed out that these values were determined six years ago, when a revised assessment was made on a scientific basis of replacement cost, less depreciation, and as depreciation is almost entirely over a 15 or 20 year period it can be conservatively stated, that the original investment represents a figure between fifteen and twenty million dollars.

The foregoing figures do not include C.P.R. property, which consists of a station, freight sheds, round house, repair shops, ice houses, coal tipple, yards, yardage, and a gas system, for the values of which we have no figures.

Neither do these figures include land values. The land assessment is approximately 4½ millions, but as assessed values are no test of actual value, we place the true value conservatively at one million dollars. Thus the value of land and improvements in the City of Medicine Hat is over fourteen million dollars on a depreciated basis. In Medicine Hat the ownership of property is almost a liability. Rents have declined to such a low level that the returns barely cover the cost of taxes, insurance, and repairs.

The following bank clearing house figures give some indication of what is happening:

1929	\$26,445,424
1932	9,648,413
1937	12,092,715

The population in the City during the past five years has declined by about 900. The drop in school students between 1923 and 1938 is 908.

In the area under discussion there are ten towns, villages, and local improvement or municipal districts, and there has been a loss of population through the whole district since 1931 of at least 5000.

The villages of Suffield, Alderson, Seven Persons, Whitla and Winnifred, Burdett, Grassy Lake, Jenner, and the town of Empress are almost depopulated, and contain many vacant stores and buildings. On the main line west from Medicine Hat, there were at one time eight or nine grain elevators in a distance of 55 miles, while today there are none. There is no irrigation in the Medicine Hat district, save a few small private spring flood or pumping schemes.

In the Lethbridge and Brooks districts irrigation has been practiced for many years and the following table shows the population increase since 1921:

Lethbridge District:	1911	1931	Increase
Lethbridge	9035	13,489	4454
Cardston	1207	1642	465
Magrath	995	1224	229
Raymond	1464	1849	385
Coaldale		251	251
Coalhurst		953	953
Monarch		117	117
Granum	250	329	79
Brooks District:			
Brooks	486	708	222
Tilley	30	200	170

These figures do not include the agricultural population. The established fact is, that in the Medicine Hat district, without irrigation, there has been a serious loss in population, while substantial gains have been made in those districts where the practice of irrigation has restored a real measure of stability to agriculture.

In the Medicine Hat district and in the Drought Area adjacent thereto in Eastern Saskatchewan there are several rural municipalities. The officials of these districts have furnished us with startling figures, as follows:

Municipal District of Excelsior—

Population in 1937	980
Increase in population in 10 years	255
Percentage of families on relief	74%
Seed grain, clothing, food and tractor fuel relief supplied in 1937	\$19,191
Stock disposed of at forced sale	629
Tax levy	\$8,529
Amount collected	\$3,115
Percentage of current taxes collected	27%
Average yield per acre	1/10 bus. wheat per acre
(The relief figures do not include fodder relief.)	

Rural Municipality of Enterprise, Saskatchewan—

Population in 1937	1356
Increase in population in 10 years	106
Percentage of families on relief	98%
Seed grain, food, clothing, fuel, feed and hay relief granted in 1937..	\$129,771
Stock disposed of at forced sale	320
Tax levy	\$54,260
Amount collected	\$2,810.81
Average yield per acre	1/10 bus. wheat per acre

Rural Municipality of Bitter Lake, Saskatchewan—

Population in 1937	650
Decrease in 10 years	50
Percentage of families on relief	99%
Amount expended in 1937 for relief	\$66,000
Stock disposed of at forced sale	50%
Tax levy	\$11,411.41
Amount collected	\$1,750.00
Average yield in 1937	Nil

Rural Municipality of Big Stick, Saskatchewan—

Population in 1937	978
Decrease in 10 years	122
Percentage of families on relief	95%
Total relief furnished in 1937	\$35,382.52
Stock disposed of at forced sale	1,000
Tax levy	\$12,352
Amount collected	\$1,500
Average yield per acre	1/4 bus. wheat per acre

We are advised that the bulk of the tax payments were made either by mortgage companies or by absentee landlords.

City of Medicine Hat—

During the period from 1930 to the end of 1937 the total expenditure in the City of Medicine Hat for relief, most of it unproductive, is \$439,736.49, as follows:

	Municipal Cost	Governments Contribution	Gross Cost
1930 Relief	\$ 381.47	\$ 786.21	\$ 1,167.68
1930 and 1931 Works Program	21,031.65	19,999.98	41,031.63
1931 Relief	2,370.97	5,214.43	7,585.40
1931 and 1932 Works Program	18,318.34	50,250.00	68,568.34
1932 Relief	11,004.75	22,051.50	33,056.25
1933 Relief	13,448.46	26,897.05	40,345.51
1934 Relief	11,029.34	20,866.58	31,895.92
1935 Relief	10,224.38	25,901.29	36,125.67
1936 Relief	20,693.69	25,915.20	46,608.89
1937 Work Program	10,238.56	10,000.00	20,238.56
1937 Relief	11,882.93	27,187.50	39,070.43
	<u>\$130,624.54</u>	<u>\$235,069.74</u>	<u>\$365,694.28</u>
Relief as above			\$365,694.28
Cost of Back-to-Land Scheme paid by City, 1930-37			8,237.57
Indigent relief, 1930-36			51,319.64
Administration costs, 1930-37			14,485.00
			<u>\$439,736.49</u>

The number of relief cases registered at the peak of each year:

1933	1066
1934	904
1935	698
1936	787
1937	765

The amount of relief distributed in the adjacent unorganized territory is not known.

In order to contrast these conditions with the situation in other areas, we desire now to draw your attention to specific irrigation districts, in order that the advantages of irrigation may be more definitely demonstrated. The figures quoted herein have been supplied to us by the Managers of the respective districts, and are believed to be quite accurate.

Lethbridge Northern Irrigation District—

The area of this district is approximately 250,000 acres, of which 100,000 acres are irrigable. Prior to the formation of the district, the land varied in value from \$5.00 to \$10.00 per acre, while the present day value for land, plus water right, is around \$20.00 per acre.

Before irrigation was established in this area the population of the district was 300. Today there are 800 families on the project, with a population in the neighborhood of 5000. Villages and hamlets have come into being as a result of irrigation and its resultant industries. About 1400 hired men work on the farms.

The district has a permanent staff of 32 and seasonal work necessitates the hiring at various times of as many as 100 more.

A sugar beet factory is established in the heart of the district; it is now a feeding centre for cattle and lambs, and irrigation insurance against drought has produced a prosperous community not requiring relief.

Eastern Irrigation District—

This district formerly was part of the Canadian Pacific Railway project, and was established in 1912. The land comprised in the district prior to irrigation was used for ranching only, and had a value of \$1.00 per acre.

There is now in use approximately 125,000 acres of irrigable land, operated in conjunction with 1,100,000 acres of dry land. Prior to irrigation the population of the district was trifling, while today, the population is approximately 5500. There are approximately 700 men employed on the farms in the district, and on the project there are 60 permanent employees. Seasonal employees number about 75.

Taber Irrigation District—

The value of land in this district prior to irrigation, was \$10.00 to \$15.00 per acre. Its present value is \$35.00 to \$50.00 per acre, the increase being due to specialized production in sugar beets and products, which are processed in a canning factory, a honey factory and a broom factory. Any relief in this area is given to the remains of a former coal mining population.

Canada Land & Irrigation Company, Limited—

This company is to be discussed in detail later. Water was first used on this project in 1920. Prior to irrigation, the lands were used principally for ranching and values were consequently very low. The value of its lands under irrigation has been placed by the Ewing Commission at approximately \$25.00 per acre for land and water right. At the present time there are 42,000 acres under irrigation, with 300 established families and a total population of 2000. Hired help on the farms will vary from 300 to 1000, according to the season. The staff of this company will average 25 from November to March and 50 from April to October, inclusive.

It is felt that it is unnecessary to deal in greater detail with these projects, or to discuss the many other irrigation districts in Alberta where irrigation is practiced. It is sufficient to say that in the Medicine Hat area without irrigation there is a picture of bleak desolation, of abandoned farms, of families living in poverty, and of huge sums being expended in unproductive relief, without any possibility of repayment. The morale of the people in these drought areas is being destroyed, and in losing self-reliant, courageous, farmers we are losing one of the finest assets of our country.

On the other hand, the irrigation districts present a picture where thousands of people are self-sustaining, are bringing up families in a proper atmosphere, establishing homes and assisting in the building up of the province, and where relief is practically unknown. In the four municipalities before referred to (excluding Medicine Hat) startling figures emerge.

Municipal District	Population	1937 Relief
Excelsior (not including fodder)	780	\$ 19,191.00
Enterprise	1356	129,771.00
Bitter Lake	650	66,000.00
Big Stick	978	35,382.00
	<u>3764</u>	<u>\$250,344.00</u>

The irrigation districts quoted have a combined population of approximately 15,000, with practically no relief. The direct benefit to the farmer from irrigation is amply demonstrated by these figures.

That, however, is only a tithe of the benefits which accrue from irrigation. The individual farmer and his family, the whole community, and the Government itself, are beneficiaries of an irrigation system. Our contention is that it is possible, and practicable to extend an existing irrigation project through an immense tract of land in the Redcliff-Ronalane district, tributary to Medicine Hat, which would result in the re-establishment of 1200 families, involving a population on the land of from 6000 to 7000 people, capable of producing annually thousands of dollars of new wealth, and converting a bleak and desolate country into a productive and prosperous one.

In or about the year 1911, the Southern Alberta Land Company was formed for the purpose of bringing under irrigation, a tract of land having a total content of 530,000 acres with an irrigable content of 200,000 acres. The area so to be developed may be divided into two tracts, the first lying between Range Six (6) on the east to the left bank of the Bow River on the west and Township Sixteen (16) on the north and the left bank of the South Saskatchewan River on the south. The second tract lies between the triangle formed by the confluence of the Bow and the Old Man Rivers, the line between Ranges Seventeen (17) and Eighteen (18) forming roughly the base of the triangle.

The capital of the company, either original or later subscribed or raised by way of debentures, less unpaid calls, was \$13,598,832.00. This amount and subsequent borrowings, was expended in the acquisition of land, and the construction of irrigation works on a progressive scale, leading to the ultimate irrigation of 200,000 acres of land. The principal items of cost approximately are:

Property	\$5,709,781.00
Irrigation Works	6,423,600.00

The company intake is on the Bow River at Carseland, about thirty miles east of the City of Calgary, and thence the main canal runs south-easterly to the main reservoir at Lake Macgregor, which has a present capacity of 300,000 acre feet. From Lake Macgregor the canal runs south-easterly to Little Bow Reservoir, with a potential capacity of 30,000 acre feet. Thence the canal runs on an easterly direction to the Bow River, thence north-easterly through the Redcliff-Ronalane district to a point north-west of the City of Medicine Hat. From the intake to a point in Township Thirteen (13) on the line between Ranges Fourteen (14) and Fifteen (15) the system is a completed one, and serves the present settlers on the project. Diversion dams, reservoirs, head gates, diversion gates, wasteways, drops, checks, bridges, laterals, and other necessary works are installed and are complete, and water has been delivered for irrigation purposes from the year 1920 to the present time. In the Redcliff-Ronalane district, east of the Bow River,

only the main canal has been constructed and it runs from the Bow River to a point north-west of Medicine Hat. Except for the canal, the scheme is otherwise incomplete in this area. For the purposes of administration and progressive construction, the whole property was subdivided into five distinct blocks, named Alberta District, Western District, Central District, Bungalow District, and the Suffield District.

The settlement of farmers on this project has been restricted to the Western and Alberta Districts, and at the present time water is being supplied to 42,000 acres in those districts. While this is the approximate limit of the present canal capacity, it is not the limit of the potential service in irrigation. Considerable sums of money must be spent, as after-mentioned, to enable the delivery of the full potential capacity of water on the whole original scheme as contemplated and planned by the Southern Alberta Land Company.

It is to be observed, that, in a discussion of the affairs of this particular scheme, its merits are overlooked in criticism of the early days of its life. Whatever was done to merit criticism was done thirty years ago and cannot now be undone. To discuss these matters now does not solve the present problem. History itself is simply a record of trial and error in the pursuit of a perfection not yet attained. The present pressing problem is the rehabilitation of an immense area of land and of bringing it into economic production, with all the attendant benefits which flow from such a result.

At the present moment water is being delivered to the limit of the canal capacity. By enlargement of the present works, a huge area of land can be developed, can be settled with people, and can be made productive.

The lands comprised in the Bungalow and Suffield Districts are now almost wholly in control, or actual ownership, of the Crown. This is the area elsewhere described, as the Redcliff-Ronalane District.

The successor to the Southern Alberta Land Company retains the bulk of its lands in the other three districts, and as already stated, 42,000 acres in the Western and Alberta Districts are under water. The Central District has not been settled. Reference may now be made to the map, appended hereto, showing the main canal of the company from its intake to Medicine Hat, outlined in blue, and the five districts mentioned, outlined in red. The following table shows the area of each parcel, and the irrigable content of each:

Districts—	Acreage	Irrigable Content
Suffield	122,589	18,110
Bungalow	100,422	32,930
Central	118,359	53,220
Western and Alberta	165,031	65,000
		<hr/> 169,260

An additional 30,000 acres north of the Bungalow area is irrigable, making a total irrigable content of roughly 200,000 acres. Deducting the 42,000 acres already under water, leaves available at least 157,000 acres which can be brought under water. The object of this brief is to urge that steps be taken by the two Governments to achieve that purpose. In that connection four main questions emerge.

1. Is there an adequate supply of water available?
2. Is the scheme feasible?

3. What is the cost?
4. Is it economically advantageous?

It is now proposed to deal with these questions in the order named.

WATER SUPPLY

Competent engineering opinion is that an ample water supply from the Bow River is available to irrigate all the irrigable lands set forth in the foregoing table. The main requirement is storage facilities and canal enlargement from the intake to Lake McGregor, both of which are possible, together with the creation of smaller presently available reservoirs along the route of the canal.

What is perhaps of the greatest importance on this phase is the fact that, at the inception of the whole scheme, involving as it did a very large tract of land to be irrigated, the approval of the Department of the Interior, which was at that time charged with the responsibility of administering water resources, was required. Such approval was duly given, only after detailed examination by Government engineers into every detail of the scheme. Unless an adequate supply of water had been available no approval would have been given, and it is submitted that no further evidence is required on this aspect of the case.

FEASIBILITY

Again competent engineering opinion is that the whole scheme throughout the whole district, as originally contemplated, is feasible and practical. The fact that 42,000 acres are under successful irrigation in the Western District practically answers the question. Again it is to be pointed out, that, under the Irrigation Act it was necessary for the Company to submit detailed plans to the Department of the Interior before an interim water license would be granted. Such plans for the whole scheme were furnished and finally approved by the Government, and the necessary license granted.

COST

An estimate of the cost to complete the works for the irrigation of 213,000 acres of the land, then embraced by the operations of the company, was made in 1926 by Mr. Hays, Chief Engineer and Manager. At that time the prices of materials and labour were relatively high. Since that date, new and improved excavating equipment has further reduced the cost of this type of work. Mr. Hays has brought his estimate down to date, making allowance for work which has been done since 1926. The estimate is as follows:

Main Canal—	Estimated Cost, 1926 213,000 Acs.	Built 1926-37	Remaining Cost at present day prices
Division A	\$ 680,280	\$ 81,241	\$ 521,000
Lake McGregor	8,360		8,360
Division B, Section 1, Little Bow	420,500	64,448	207,780
Little Bow Reservoir	58,480		37,000
Division B, Section 2	268,440	17,119	146,000
Division B, Section 3	312,920	43,238	305,230
Totals, Main Canal to Ronalane	\$1,748,980	\$206,046	\$1,225,370

Lateral System—	Acres	Estimated Cost, 1928 213,000 Acs.	Built 1926-37	Remaining Cost at present day prices
Branch Canals		\$ 40,340	.....	\$ 40,340
Western and Alberta Districts..	75,000	416,390	\$121,236	179,000
Central District	45,000	266,100	.....	202,500
Drainage Ditches		89,180	6,020	83,160
Patrol Houses		26,000	11,826	20,000
Surveys (a) .....		.....	17,626	.....
	<u>120,000</u>	<u>\$2,586,990</u>	<u>\$362,754</u>	<u>\$1,750,370</u>
For Lands East of Ronalane—				
Main Canal		170,500	.....	170,500
Lateral System—				
Bungalow District	32,000	246,970	.....	160,000
Suffield District	18,000	152,580	.....	180,000
Suffield District Drainage		30,000	.....	30,000
Patrol Houses		10,000	.....	10,000
Laterals for additional land at \$5.00 per acre	20,000	.....	.....	100,000
Reservoirs .....		.....	.....	100,000
	<u>70,000</u>	<u>610,050</u>	<u>.....</u>	<u>678,500</u>
Grand Totals		<u><u>\$3,197,040</u></u>	<u><u>\$362,754</u></u>	<u><u>\$2,428,870</u></u>

The 75,000 acres above referred to in the Western and Alberta Districts include 10,000 acres of privately owned lands. Thus, carefully prepared estimates (in which a tolerance of 15% to 25% has been allowed) show that, in order to bring the total original project under water, the cost would be the sum of \$2,500,000. At this point a subsidiary question may arise. "What part, if any, of this cost should be charged to the individual parcels of land embraced in the scheme?"

In the past thirty years there has been a marked change of opinion on that question. In the United States of America the Reclamation Act of 1902 authorized the construction of irrigation works and the acreage cost of construction was charged to the land and was payable by the farmer, but without interest charges. The same principle was adopted in the various schemes in Alberta, and it was hoped to recover from the settler his proportionate acreage cost of the capital expenditure. Experience through the years has proved the fallacy of this procedure, and it is now abandoned in both countries. Government aid in irrigation construction is just as needful as is the establishment and maintenance of demonstration farms.

The United States Government for many years has been writing off, and is now writing off progressively, substantial portions of construction costs on various irrigation projects.

On this phase of the subject reference may be made to what is known as the Wilson report before referred to where it is stated:

"Therefore the cost of the reclamation should not be borne only by the farmers who operate the land but should be apportioned according to its benefit should the returns of these farmers benefited by irrigation at any particular

time in the future become abnormal or out of line with the general level of agriculture the state is in a position to recapture a portion of such abnormal profit through income, increment or if need be special forms of taxes."

It may be stated, without fear of successful contradiction, that the apparent failure of irrigation in the past has been due to the fact that an attempt has been made to collect the whole of the capital cost of irrigation development from the land irrigated. This mistake is now universally recognized, and the findings of the 1936 commission headed by Hon. Mr. Justice Ewing in this regard may be quoted:—

"The Commission has been made fully aware that irrigation authorities now agree that the full capital cost of an irrigation project should not be charged up to the lands immediately benefitted. The conversion of a non-productive arid area into lands intensively farmed benefits not only the irrigation farmer but also the community, the Province and the Dominion, as well as many private enterprises such as railways and factories."

Little more need be said. The proposed project is economically sound, is practicable from an engineering standpoint, and our submission is that the expenditure of the amount mentioned from public funds for the development of the Redcliff-Ronalane scheme is fully warranted.

IS THE SCHEME ECONOMICALLY ADVANTAGEOUS?

1. The primary purpose to be served is the rehabilitation of hundreds of farmers, and the bringing into production of substantial acreage which is now practically waste lands. In the Ewing report informative figures are given, showing that under irrigation gross production of roughly \$25.00 per acre is possible. At the present time the area under discussion produces nothing but a sparse growth of grass, so that even if the figures in the Ewing report are discounted even by one-third, the irrigation of the Redcliff-Ronalane scheme would produce abundant new wealth, resulting in the rehabilitation of the whole district. In terms of national wealth, the production per acre in one year, will equal the capital acre cost of the scheme.

2. The establishment of six to seven thousand people in the district would again place lands which are now on the non-tax list on a tax-paying basis, with immediate gain to the Provincial Government, and spreading the present burden of taxation over a greater number of people.

3. All of these people would be taken from the relief rolls and placed on a self-supporting basis, resulting in a decrease of relief expenditure and, what is more important, restoring the self-respect and morale of the individual.

4. An abundant supply of winter feed and water would be assured for the live stock on the huge acreage of ranch lands in the immediate vicinity of the project. The depletion of ranch lands through drought and erosion makes such a supply of feed and water an imperative necessity.

5. The resultant production of new wealth would provide occupation for possibly 6000 people in existing towns and villages, and would result in the creation of new centres throughout the district to serve the immediate wants of the respective parts thereof.

6. It is impossible to give figures or to estimate with any degree of accuracy the amount of additional traffic which would accrue to the Railway as a result of the de-

velopment of the proposed scheme. It is, however, axiomatic that each car of produce handled outwards, produces an import movement, resulting in extra work and employment on the railroads. It is felt that this phase is so obvious that it requires no further development.

7. The establishment of industry always follows irrigation and provides employment for hundreds of people. It is not too much to expect that the same result will follow from the development of the Redcliff-Ronalane scheme. Irrigation in other districts in Southern Alberta has resulted in:

1. The development of honey production at Vauxhall, Taber, Coaldale and other points.
2. The establishment of a canning factory at Taber.
3. The establishment of a sugar beet factory at Raymond.
4. The establishment of a sugar beet factory at Picture Butte.
5. The establishment of a broom factory at Taber.

The canning factory at Taber uses annually the specialized produce from 2000 acres, something impossible without irrigation. The cost of buildings and machinery was \$53,000. The pack consists of corn, peas, string beans, pumpkins and pork and beans. The cash capital required to finance the season's run is \$100,000.

The sugar beet industry is of considerable importance and should be dealt with in some detail. In 1936 the two plants of Canadian Sugar Limited at Raymond and Picture Butte handled 207,000 tons of beets from 18,328 acres. It is now demonstrated beyond doubt that the climate of the province is suitable for this type of agriculture and produces a beet with a high sugar content. In 1936 the average yield per acre was \$73.95, while production cost was \$40.46, leaving a gross profit of \$33.49 to apply on land costs, taxes and water.

Beet tops form a useful product for feed. Freight costs for 1935 were \$330,000. The Dominion Government was paid Excise Tax in 1935 of \$441,648 and in 1936 the sum of \$653,991, representing in two years two-fifths of the amount required for the proposed development of the Redcliff-Ronalane project. The company's expenditure for fuel, supplies, wages, raw material and freight in 1933 amounted to \$1,594,000. This extensive and valuable industry was made possible only by irrigation. The Excise Tax paid in one year amounts to more than the capital acre cost of irrigating the acreage which produced the beets.

In competition with the sugar beet industry is the cane sugar industry, both controlled by the same company. The economic development of Western Canada demands the extension of the sugar beet industry, this fact being recognized in a report submitted in the House of Commons in 1932, as follows:

"Your Committee recommends that in view of the existing tariff on sugar and in consideration of the substantial payments being made to agriculture and labour by the sugar beet factories at present in operation, the cane sugar factories should undertake to provide for a gradual increase of facilities for the refining of Beet Sugar in Canada and that with the additional advantages in freight rates to points in the middle west, heretofore described, factory facilities

should now be steadily increased in Western areas where beets are grown and thereby make it possible to produce from beets a more substantial percentage of the sugar consumption of Canada."

"Your Committee further recommends that if no successful attempt be made in the immediate future by the refineries to increase the facilities for the manufacture of beet sugar, the Government should take into consideration steps to accomplish that end."

8. The expenditure of \$2,500,000 in the extension of the present works as herein proposed would constitute a public work of a productive nature, and would absorb a large number of those presently unemployed, and in receipt of relief. One thousand men would be employed for a year and a half.

Mr. A. Griffin, Chief Engineer, Canadian Pacific Railway Company, Department of Natural Resources, in a paper read at a session of the Water Development Committee held in Regina in 1935, says in part:

"One thing that may be said for the communities having irrigation: There may have been a shortage of money for clothes and taxes but there has been no shortage of money for essential food in the irrigated areas and the dry areas adjacent to them. It is quite probable that if irrigation had been previously provided at public expense it would all have been returned in the last five years in reduced relief costs and there would have been a permanently increased producing capacity as clear profits."

At another point in his address, Mr. Griffin said:

"But taking solely the community and nation building view it is obvious that an acre of land producing a crop with a gross value of \$50.00, even though it costs the farmer \$45.00 to produce it, leaving him only \$5.00 per acre on a relatively small acreage for his own effort, is contributing vastly more to the support of population than an acre of land which produces \$5.00 gross and costs the farmer \$4.00 to produce, even though the second farmer with his larger acreage may individually be better off than the first."

These two points of view expressed by an eminent authority on irrigation cannot be disregarded in a consideration of the economic value of irrigation. They assist in the establishment of our contention, that the extension, enlargement, and completion of the irrigation works originally contemplated through the Redcliff-Ronalane district with the expenditure of public money, is economically sound and advantageous, and can only result in benefit, not only to the individual who settles on the land, but to adjacent communities, and to the Province and nation as a whole.

We are not unmindful of the fact that there lies to the south-west of the Western District already mentioned a tract of land which can be brought under irrigation. The possible acreage is said to be between 40,000 and 50,000 acres. It may be argued that this land, which is closer to the intake than the Bungalow and Suffield Districts, should receive attention first. The answer to this contention is simple. The full capacity of water is now being delivered in the Western and Alberta Districts. The potentially available supply can only be made available by the enlargement of the existing works. The necessary enlargement should be done all at once so that the whole available tract of irrigable land may be put under water. It may be said that work of this type should be

done on a progressive basis. That might be sound economics in case of a private company but the problem we are facing is of such a magnitude as to constitute a national crisis. The simple question is that of rehabilitation on a large scale on the one hand, or a continuance of the present system of unproductive, morale-destroying, relief expenditure, on the other.

The problem admits of one answer. Rehabilitation of this area is only possible through irrigation. Irrigation of this area is only possible through a utilization of the existing works. No other method exists and only by that method can water be brought to these lands.

To the question is the scheme economically advantageous there is only one answer—Yes.

It is possibly within our province to indicate the type of agriculture to which these lands might be put under irrigation. In our opinion, in its initial stages, the logical development of the project is that of producing feed. Medicine Hat is, and has always been, the centre of the stock industry in this province. At one time winter feed did not present any great problem. Today feed is being brought to the district in large quantities and there is a present market for this produce. The industry of finishing cattle has been established, and with adequate and certain supplies of feed this industry could be extensively developed, with resultant benefits to both types of agriculture. A creamery already established in Medicine Hat could absorb all the dairy products which could be produced on the proposed irrigated area. These activities would be followed by other types of development, such as have followed in other irrigated districts.

It is not our intention, nor indeed should we attempt to formulate any plan for the settlement of the proposed district. This question must be left to the Dominion and Provincial Governments. May we suggest, that any differences of opinion in matters of detail should be subordinated to the great urgent need of finding an immediate solution of the difficult situation which confronts them with regard to South-Eastern Alberta, and the other adjacent drought areas.

The submissions of the Chamber of Commerce, therefore, are:

1. That the Dominion Government, either through the Prairie Farmers' Rehabilitation Act Committee, or by special appropriation made by Parliament for the purpose, or through a Relief Works programme, authorize and proceed with the immediate completion and extension of the irrigation works referred to, so as to make water available to every irrigable acre within the tract of land embraced by the original scheme.

2. That the Dominion and Provincial Governments decide upon a policy of land settlement within the area mentioned, to ensure the re-establishment and rehabilitation of hundreds of farmers within the drought area.

What is the alternative? Unless this or some such similar scheme is adopted (and where there is another scheme we who are on the ground do not know) further abandonment of farms is inevitable, and impoverished communities will be forced to give up the present hopeless struggle. The future prospects of individuals, the city, the towns and the villages within the district, are indeed gloomy, and perhaps hopeless, while on the other hand, their future can be assured through the existence of a prosperous adjacent farm area.

The future of these individuals, these communities, of railroads, of industry and of agriculture itself in the Medicine Hat district rests upon the measures which are taken for the conservation and distribution of the ample supply of water in our rivers.

The problem is a national one and can only be solved by the two Governments concerned, and by the methods outlined herein.

DATED at the City of Medicine Hat in the Province of Alberta, this 17th day of February, A.D. 1938.

MEDICINE HAT CHAMBER OF COMMERCE.

R. S. BOYD, President.

W. T. BANNAN, Secretary.

